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EXAMINER

SIMONE, CATHERINE A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,193	Applicant(s) HERFERT ET AL.	
	Examiner Catherine Simone	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-25 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-25 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 112, first paragraph, rejection of claim 28 of record in the previous Office Action mailed 8/5/2008, Pages 2-3, Paragraph #3 has been withdrawn due to the Applicant's amendment filed 12/1/2008.
2. The 35 U.S.C. 112, second paragraph, rejection of claim 14 of record in the previous Office Action mailed 8/5/2008, Page 3, Paragraph #6 has been withdrawn due to the Applicant's amendment filed 12/1/2008.
3. The 35 U.S.C. 103(a) rejection of claims 1-8, 11 and 13-27 over Melius et al. in view of Beihoffer et al. of record in the previous Office Action mailed 8/5/2008, Pages 3-7, Paragraph #8 has been withdrawn due to the Applicant's amendment filed 12/1/2008.
4. The 35 U.S.C. 103(a) rejection of claims 9, 10 and 12 over Melius et al. in view of Beihoffer et al. and further in view of Brueggemann et al. of record in the previous Office Action mailed 8/5/2008, Page 8, Paragraph #9 has been withdrawn due to the Applicant's amendment filed 12/1/2008.
5. The 35 U.S.C. 103(a) rejection of claim 28 over Ahmed et al. in view of Beihoffer et al. of record in the previous Office Action mailed 8/5/2008, Pages 3-7, Paragraph #8 has been withdrawn due to the Applicant's amendment filed 12/1/2008.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11, 13-15, 18-20, 23, 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 6,011,196) in view of Beihoffer et al. (US 6,072,101).

8. Regarding claims 1, 13, 14, 18 and 28, Wang et al. disclose an absorbent article (col. 10, lines 28-61) comprising an absorbent sheet consisting essentially of a superabsorbent polymer component, as particles, (col. 8, lines 8-10; and claim 1) and a plasticizing component in an amount of about 0.1 to about 200 parts by weight per 100 weight parts of the superabsorbent polymer component (claim 1; and col. 5, lines 30-35), wherein the sheet contains about 60% to 100%, by weight, of the superabsorbent polymer component and plasticizing component (col. 11, lines 24-37), and 0% to 40%, by weight in total, of one or more optional ingredient such as a nonabsorbent filler (fiber; col. 11, lines 30-33) and further the sheet is free of fibers (col. 11, lines 24-25 and 28-33), since the nonabsorbent fiber is optional (col. 11, lines 30-33).

Wang et al. fail to specifically teach the superabsorbent polymer component (particles) comprising at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin. Wang et al. also fail to specifically teach the sheet material having a density of about 0.65 to about 0.85 g/cc.

Beihoffer et al. teach multicomponent superabsorbent polymer particles that are useful in diapers (col. 15, lines 48-51) and include at least one unneutralized acidic water-absorbing resin

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and at least one unneutralized basic water-absorbing resin (col. 4, lines 15-31) for the purpose of overcoming the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses (col. 4, lines 32-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Wang et al. to include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Furthermore, one of ordinary skill in the art would have recognized that having a density between 0.65 and 0.85 g/cc for the absorbent sheet in Wang et al. would be a workable option from the teachings in Wang et al., since Wang et al. teach that the absorbent sheet can be free of fibers (col. 11, lines 24-25 and 28-33), which is similar to that of the presently claimed absorbent sheet, thereby forming an absorbent sheet with increased density. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the absorbent sheet in Wang et al. to have a specific density between 0.65 and 0.85 g/cc, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

Additionally, the limitation “is flexible” is a functional limitation and is deemed to be an inherent characteristic of the prior art, since the prior art is substantially identical in composition and structure. MPEP 2114 and 2183. The Examiner’s sound basis for this assertion is that the

combination of Wang et al. and Beihoffer et al., as shown above, teach an absorbent sheet substantially similar in structure and composition to that of the claimed absorbent sheet.

Regarding claim 2, Wang et al. further fail to disclose the superabsorbent polymer component comprising discrete particles of the acidic resin and discrete particles of the basic resin. Beihoffer et al. teach superabsorbent polymer particles comprising discrete particles of the acidic resin and discrete particles of the basic resin (col. 4, lines 40-48) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Wang et al. to include discrete particles of acidic resin and discrete particles of basic resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 3, Wang et al. also fail to teach the superabsorbent polymer component comprising multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin. Beihoffer et al. teach multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin (col. 5, lines 5-9 and 55-58) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Wang et al. to be multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin as suggested by Beihoffer et al. in order to overcome the salt

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poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 4, note the superabsorbent polymer particles in Wang et al. have a particle size distribution of about 10 to about 810 μm (col. 8, lines 15-19).

Regarding claim 5, note the superabsorbent polymer particles in Wang et al. have a particle size distribution of about 30 to about 375 μm (col. 8, lines 15-19).

Regarding claim 6, note the superabsorbent polymer particles in Wang et al. have a mass median particle size of less than about 400 μm (col. 8, lines 15-19).

Regarding claim 7, note the acidic water-absorbing resin in Beihoffer et al. is polyacrylic acid (col. 4, lines 15-17).

Regarding claim 8, note the basic water-absorbing resin in Beihoffer et al. is a poly (dialkylaminoalkyl(meth)acrylamide) (col. 4, lines 17-21).

Regarding claims 9 and 10, note in Wang et al. the plasticizer is an alcohol such as methanol or ethanol (col. 9, lines 16-18) or a sulfoxide such as dimethylsulfoxide (col. 9, lines 18-19) or an amide such as dimethylformamide (col. 9, line 18).

Regarding claim 11, Wang et al. disclose the superabsorbent polymer component (particles) being internally plasticized (covalently bonded) (claim 5).

Regarding claim 15, the combination of Wang et al. and Beihoffer et al., as shown above, teach an absorbent sheet substantially similar in structure and composition to that of the claimed absorbent sheet. Thus, the limitation “having a stiffness of less than about 6 mNm” in claim 15 is deemed to be a latent property of the prior art, since the prior art is substantially identical in

composition and structure. It has been held that mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. MPEP 2145 (II).

Regarding claim 19, the article of Wang et al. is a diaper or a catamenial device (col. 12, lines 13-43).

Regarding claim 20, Wang et al. disclose the absorbent sheet as being a core of a diaper (col. 10, lines 48-65).

Regarding claim 23, Wang et al. disclose a topsheet in contact with a first surface of the core, and a backsheet in contact with a second surface of the core, the second core surface opposite from the first core surface (col. 10, lines 62-65).

Regarding claim 25, note the diaper disclosed in Wang et al. is deemed free of an acquisition layer, since Wang et al. is silent to having an acquisition layer.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Beihoffer et al. as applied to claim 1 above, and further in view of Brueggemann et al. (US 6,051,317).

The combination of Wang et al. and Beihoffer et al. teach the presently claimed absorbent sheet as shown above. However, Wang et al. fail to specifically teach the plasticizer being selected from the group of plasticizers recited in claim 12. Brueggemann et al. teach sheet-like superabsorbent structures, which can be used in diapers, to include plasticizers such as glycerol (col. 2, lines 46-49) for the purpose of varying the flexibility of the sheet (col. 2, lines 44-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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have modified the plasticizer in Wang et al. to include glycerol as suggested by Brueggemann et al. in order to vary the flexibility of the superabsorbent sheet.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Beihoffer et al. as applied to claim 1 above, and further in view of Schmidt et al. (US 7,195,810 B1).

The combination of Wang et al. and Beihoffer et al. teach the presently claimed absorbent sheet as shown above. However, Wang et al. fail to disclose the absorbent sheet being embossed or needle punched.

Schmidt et al. teach an absorbent sheet wherein the sheet is embossed for the purpose of enhancing fluid distribution in the product (col. 1, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the absorbent sheet in Wang et al. to be embossed as suggested by Schmidt et al. in order to enhance fluid distribution in the absorbent article.

11. Claims 21, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Beihoffer et al. as applied to claims 1 and 20 above, and further in view of Widlund et al. (US 5,728,085).

As shown above, the combination of Wang et al. and Beihoffer et al. teach a diaper having a core comprising the absorbent sheet as presently claimed. However, Wang et al. fail to teach the core comprising two to five absorbent sheets wherein at least one of adjacent sheets has

a wicking layer disposed between the sheets and further comprising an acquisition layer disposed between the topsheet and the core.

Widlund et al. teach an absorbent body to be used in an absorbent article, such as a diaper, that includes three absorbent sheets (Fig. 10, layers 14-16) wherein at least one of adjacent sheets has a wicking layer disposed between the sheets (Fig. 10, wicking layer 15) and further comprising an acquisition layer (Fig. 10, layer 14) disposed between the topsheet (Fig. 10, topsheet 12) and the core (Fig. 10, core 11) for the purpose of exhibiting extremely good absorption properties, both with respect to its ability to quickly take up fluid and also with respect to its ability to spread fluid throughout the material and further exhibit low rewetting tendencies as well as being capable of being made very thin.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the absorbent core in Wang et al. to include three absorbent sheets wherein at least one of adjacent sheets has a wicking layer disposed between the sheets and an acquisition layer disposed between the topsheet and the core as suggested by Widlund et al. in order to exhibit extremely good absorption properties, both with respect to its ability to quickly take up fluid and also with respect to its ability to spread fluid throughout the material and also exhibit low rewetting tendencies as well as being capable of being made very thin.

Response to Arguments

12. Applicant's arguments with respect to claims 1-15, 17-25 and 28 have been considered but are moot in view of the new grounds of rejection, which are presented above.

Conclusion

13. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571) 272-1501. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Catherine Simone/
Examiner, Art Unit 1794

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794